

# PERIODIC MAINTENANCE ACTION - USD<sub>o</sub>E ARMS SITES

## ELECTROLYSER

Momote

Date: 15-Oct-03

Check Performed	H'Book Reference	Requirement	Action
<b>Gas Analyser</b>			
1 Battery condition of analyser	Section 4.1 (Teledyne)	Between 6 - 8 on the 25% scale	OK
2 Calibration against air of gas analyser	Section 3.4.1 (Teledyne)	20.80%	Corrected up
3 Aspirator filter condition		Moisten, replace when gluggy	Good
4 Electrolyser hydrogen gas sample reading		Less than 1 %	0.02
<b>Electrical Cabinet Pressurisation System</b>			
5 Wind sail switch operation	Section 8G(b) (Electrolyser Corp)		OK
6 Purge time delay relay operation	Section 7B(ii) (Electrolyser Corp)	Greater than 60 seconds	62
7 Air vent holes, rear of electrical cabinet unobstructed			OK
8 Exterior air intake vent unobstructed			Cleared
9 Lubrication of pressurising fan		4 drops of oil per lubricating point	Oiled
10 Air filter		Clean and replace as necessary	Replaced
<b>Control Systems</b>			
11 High pressure cut-off switch	Section 8G(a) (Electrolyser Corp)	100 ± 3 psi	700 kpa
12 Compressor start switch (ZSH6)	Section 7D(iii) (Electrolyser Corp)		OK

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13 Compressor stop switch (ZSL6)	Section 7B(iii) (Electrolyser Corp)		OK
14 Compressor stop switch (ZSLL6)	Section 7B(iii) (Electrolyser Corp)		OK
15 Operating current	Section 7B (Electrolyser Corp)	250 amps	240
16 Idle current	Section 7B (Electrolyser Corp)	30 amps	30

### Water System

17 Demineralizing cartridge colour	Section 8F (Electrolyser Corp)	Change if showing colour change (black > brown)	No Change
18 Deionising resin		Change if above test shows a colour change	Nauru only
19 Water seal	MEI 4.4001	Clean	Cleaned
20 Water seal overflow pipe height	MEI 4.4001 par 18	280mm	Set
21 Water tubing - 1/4" dia		Check condition for deterioration and replace as necessary	Fair

### Electrolytic Cells

22 Cell condition			Fair
23 Vent tube condition			Good
24 Electrolyte leaks			Nil
25 Oxygen contamination check of each cell	Cell 1	Less than 1%	0.02
	Cell 2		0.03
	Cell 3		0.02
	Cell 4		0.03

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	Cell5		0.03
26 Specific gravity of each cell	Cell 1		1280
	Cell 2		1285
	Cell 3	Greater than 1270	1320
	Cell 4		1290
	Cell 5		1320
27 Hydrogen vent pipe exit		Check for obstructions and remove	Clear
28 Oxygen vent pipe exit		Check for obstructions and remove	Clear
<b>Compressor</b>			
29 Compressor		Complete overhaul every maintenance visit	Checked
30 Compressor valve plate		Complete overhaul every maintenance visit	Nauru only
31 Coalescing filter		Change every maintenance visit	Changed
32 Compressor oil		Change every maintenance visit	Changed
33 Pumpdown test		Valve V1 in vent position	3 min 30sec@ 640 kpa
<b>Moisture</b>			
34 Storage cylinder moisture vented		Every maintenance visit	20 ml
<b>General</b>			
35	Cleaning of electrolyser		Cleaned
36	Cleaning of 'H' van		Nauru only

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## Leak Tests

37 Low pressure leak test between cells and gasholder	No greater than 2.5cms indicated by inlet manometer	OK
38 Low pressure leak between gasholder and compressor inlet valve	No greater than 2.5cms indicated by gasholder position	OK

## Manometer

39 Inlet manometer fluid level	Level not less than + 1.0cms	OK
40 Outlet manometer fluid level	Level not less than + 1.0cms	OK
39 Gas tubes - 3/8" dia	Check condition for deterioration	Good
41 Manometer tube exits	Check that they are not obstructed	Clear

## Safety

42 Safety signs prominently displayed		OK
43 Drench shower operates satisfactorily (water, temperature, pressure etc)		OK
44 KOH neutralising fluid	Sufficient acetic acid available	3 Litres

## REMOTE BALLOON LAUNCHER

## Visual Inspection

1 Operation of sliding door	OK
2 Operation of door catch (inside/outside)	OK

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3	Tension of rubber curtains	Good
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4	Gas hose condition	Good
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5	Earth system condition	Good
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### Safety

6	Safety signs prominently displayed	Good
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### Remote Launch Mechanism Enclosure

7	Water sprays operate satisfactorily	OK
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8	Light in enclosure illuminates	OK
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9	Flashing light and audible alarm operates satisfactorily	OK
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10	Blower fan operates satisfactorily	OK
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11	Balloon release mechanism and cable not obstructed and operates satisfactorily	OK
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### Leak Tests

12	Balloon fill valve	RBL Technical Manual part 7 section 5.1	Determine increase in pressure after 60 minutes	Nil increase
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13	Hydrogen pipeline and fittings	RBL Technical Manual part 7 section 5.3	Check pipes and fittings after opening balloon fill valve for 20 seconds	Nil leaks
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### Regulator

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14	Regulator gas flow rate	RBL Technical Manual part 7 section 5.2	100kPa	98kPa
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**Earthing System**

15	Electrical supply earth resistance	RBL Technical Manual part 7 section 5.4		OK
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16	Lightning earth resistance	RBL Technical Manual part 7 section 5.5		OK
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**Bung Inserter**

17	Check operation of bung inserter	Lubricate all moving components with synthetic lubricant containing PTFE		Lubricated
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**Other Comments**

Replaced cell number 2  
Replaced diode in rectifer

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**Equipment Spares Re-Order**

Sediment Filter	41-DPPPC-1	10 Micron
Compressor Oil		
Coalescing filter		
Fume Cartridge		
Strap- inhibitor string		
unwinder		

**Officer : Troy Culgan**

**Date : 18- Oct-03**

**Station : Momote**